

PSY51

OBESITY AND MEDICARE EXPENDITURE: ACCOUNTING FOR AGE-RELATED HEIGHT LOSSOnwudiwe N¹, Stuart B², Zuckerman IH², Sorkin J³¹University of Maryland School of Pharmacy, SILVER SPRING, MD, USA, ²University of Maryland School of Pharmacy, Baltimore, MD, USA, ³University of Maryland School of Medicine Division of Gerontology, Baltimore, MD, USA

OBJECTIVES: To determine the relationship between body mass index (BMI) and Medicare expenditure for adults 65-years and older and determine whether this relationship changes after accounting for possible misclassification associated with age-related height loss. **METHODS:** Using a cross-sectional study design, the relationship between BMI and Medicare expenditure was examined among beneficiaries who completed the Medicare Current Beneficiary Survey (MCBS) in 2002, were not enrolled in Medicare HMO, had a self-reported height and weight, and were 65 and older ($n = 7707$). Subjects were classified as underweight, normal weight, overweight, obese (obese I), and severely obese (obese II/III). To adjust for the artifactual increase in BMI, the reported height was transformed by adding the sex-specific age-associated height loss to the reported height in MCBS. The main outcome variable was total Medicare expenditure. **RESULTS:** There is a U-shaped association between BMI and Medicare expenditure: underweight \$8238 ($p < 0.0005$), normal weight \$6801 ($p < 0.0000$), overweight \$5653 (reference), obese I \$6716 ($p < 0.0031$) and obese II/III \$7912 ($p < 0.0001$), p values are compared to overweight. A U-shaped association was also seen after accounting for height loss: underweight \$7878 ($p < 0.0003$), normal weight \$6308 ($p < 0.2465$), overweight \$5988 (reference), obese I \$7350 ($p < 0.0031$) and obese II/III \$8171 ($p < 0.0029$) compared to overweight. **CONCLUSIONS:** Previous research have looked at the relationship of BMI to health care costs and found that the full burden of medical expenditures is found in the overweight and obese categories. This study demonstrates that minimal cost is not normal BMI, but rather overweight, regardless of whether age-associated loss of height is accounted for. However, accounting for age-associated loss of height does decrease the magnitude of the spending difference between normal weight and overweight.

PSY52

ESTIMATION OF CLINICAL AND ECONOMIC IMPACT OF CHRONIC PAIN ON THE BENEFICIARIES OF A PRIVATE HEALTH PLAN IN BRAZILReis Neto JP, Stefani S

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OBJECTIVES: There are no detailed assessments for Brazil regarding the prevalence of chronic pain. The literature describes prevalence of 8% to 60%. The objective of this study is to estimate the impact of this disease on a population of a private health plan and the association with financial expenses. **METHODS:** An epidemiological survey was performed on 46,407 beneficiaries (37.8% from the global life coverage), 4,700 of whom referred a variety of symptoms, including 1,469 (31%) with pain complaints. Primary data, concerning expenses with hospitalization and use of medical services during a period of 12 months, of beneficiaries who referred pain, were analyzed and compared with those of individuals without this symptom. Data, based on a pharmacy benefit program, concerning 54,843 units of reimbursed medications, was collected to identify the most frequently drugs used for this symptom. **RESULTS:** From the beneficiaries who mentioned pain, 30% were predominantly in the lower limbs, 30% low back pain, 18% joints, 9% abdomen and 14% other kinds. The correlation between two groups demonstrated that patients who had chronic pain had a 2.6 higher use of physician and hospital services (clinic, exams and inpatient care) and an annual expenditure per capita of US\$ 581.35 compared to \$ 233.55 in the group without pain complaints ($p < 0.001$). Among the most frequently reimbursed medications, 36% were products commonly used for pain relief: 10.5% non steroidal anti-inflammatory drugs, 9% antiepileptic, 7.3% non opioid; 4.4% ansiolytics, 3.8% antidepressant and 1% neuroleptic drugs. **CONCLUSIONS:** This epidemiological survey and the correlation with pharmacy benefit data, demonstrated a high prevalence of spontaneous pain complaints and a higher demand of the health insurance resources by those patients who mentioned this symptom spontaneously. The findings of this study suggest the need implementing effective support measurements for chronic pain patients.

POSTER SESSION III

CARDIOVASCULAR DISORDERS – Clinical Outcomes Studies

PCV1

EVALUATING CLINICAL OUTCOMES OF AN EMPLOYER SPONSORED MULTI CENTER DIABETES AND HYPERTENSION MEDICATION THERAPY MANAGEMENT PROGRAM (MTMP)Pinto SL, Bechtol R, Kumar J

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OBJECTIVES: Evaluate the clinical outcomes of a pharmacist-conducted MTMP for Lucas County employees and their dependents with diabetes and/or hypertension over a one year period. **METHODS:** A retrospective-prospective study using a cohort receiving pharmacist provided MTM services in Northwest Ohio was used. Services were provided to eligible Lucas County employees by a coalition of independent pharmacies. Subjects eligible to participate must have had primary medical insurance and prescription coverage through Lucas County and should have a diagnosis of dia-

betes and hypertension. Data was extracted from the pharmacists' intake forms and clinical notes. Clinical outcomes extracted were A1c, systolic blood pressure (SBP), diastolic blood pressure (DBP), and body mass index (BMI). Patient's self-monitored blood glucose (SMBG) and caffeine intake per day were also documented. The patients considered for analyses had at least two documented visits at one of the coalition pharmacies within one year of their enrollment. Wilcoxon signed-rank test was used to analyze data. **RESULTS:** A total of 467 patients have been enrolled to date. Of these, 193 patients have documented baseline A1c values. For A1c, patients with values greater than 7 at baseline were considered for data analyses ($N = 70$). Within one year of starting the MTM program, these patients' mean A1c values decreased from 8.21 to 7.41 ($P = 0.000$). Three hundred and fifty three patients have documented baseline blood pressure values. Within 1 year, the SBP decreased from 130.72 to 127.84 ($P = 0.006$) and DBP decreased from 81.75 to 80.03 ($P = 0.004$) ($N = 319$). Similarly, BMI has decreased non-significantly, caffeine consumption has decreased significantly ($P < 0.05$) ($N = 143$) and SMBG per day has also increased significantly ($P < 0.05$) ($N = 82$). **CONCLUSIONS:** This study provides an initial glimpse into the impact of pharmacists' interventions on clinical outcomes for patients participating in an employer-sponsored MTMP.

PCV2

UNDERSTANDING PATIENTS DIAGNOSED WITH ATHEROSCLEROSIS AND THEIR DIAGNOSIS AND TREATMENT PATTERNSJensen MM¹, Costa-Scharplatz M², Fox KM³, Gandhi SK⁴¹AstraZeneca R&D, Lund, Sweden, ²AstraZeneca R&D Sodertalje, Sodertalje, Sweden,³University of Maryland School of Medicine, Monoton, MD, USA, ⁴AstraZeneca, LP,

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OBJECTIVES: To examine the characteristics of patients diagnosed with atherosclerosis and describe the method of diagnosis and their management in a US managed care setting. **METHODS:** Retrospective study utilizing administrative claims data from a US national health plan with >10 million commercial and Medicare Advantage members identified patients between March 31, 2005 and February 28, 2006, who were newly diagnosed with atherosclerosis (i.e., with no diagnosis of atherosclerosis and no history of cardiovascular events in the previous year). Patient demographics and Charlson comorbidity scores were computed. Lipid values and cardiac diagnostic tests were estimated one year pre- and post-diagnosis. **RESULTS:** A total of 58,060 patients with newly diagnosed primary atherosclerosis were identified. The patient population was comprised of 60% men and 70% were >50 years of age. The mean Charlson comorbidity score was 2.0, with 25% of patients with diabetes, 15% with COPD, and 7% with congestive heart failure. Approximately, 55% of patients were at high or moderate risk of coronary heart disease (CHD) based on National Cholesterol Education Program Adult Treatment Panel III guidelines. The majority of patients (45%) were managed by a cardiologist at the time of atherosclerosis diagnosis. Of patients with lipid value measures, mean LDL-C levels were 118 mg/dL pre-diagnosis and 113 mg/dL post-diagnosis. Less than 20% of patients with atherosclerosis had angiography, ultrasound or cardiac stress test within the year preceding diagnosis and 12% of all patients were tested <3 months prior to diagnosis. **CONCLUSIONS:** Patients diagnosed with atherosclerosis were older, had more comorbidities and were more likely to be male. They had a moderate or high CHD risk and the majority was managed by cardiologists. Future similar research should focus on identifying distinguishing characteristics to facilitate identification of patients with atherosclerosis by health care providers.

PCV3

MEDIATING ROLE OF CEREBROVASCULAR DISEASE IN THE ASSOCIATION BETWEEN DIABETES MELLITUS AND DEMENTIALu Z, Stuart B, Zuckerman IH

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OBJECTIVES: Diabetes mellitus (DM) has been reported to affect cognition, but its relationship with dementia remains uncertain. The literature also indicates that DM is a major risk factor for cerebrovascular disease (CVD), a disorder that significantly increases dementia risk, suggesting that the association between DM and dementia might be mediated through CVD, although quantitative analysis on its role is lacking. Thus, we 1) estimated the association between DM and dementia among the elderly, and 2) determined the mediating role of CVD in that association. **METHODS:** A retrospective cross-sectional study was conducted using the 2002 Medicare Current Beneficiary Survey. Participants were 8132 community-dwelling and institutionalized fee-for-service Medicare beneficiaries aged ≥ 65 years. The dependent variable was a diagnosis of dementia (Alzheimer's disease, vascular dementia, or either type); the independent variable of interest was presence of DM during 2002. Potential confounders were age, gender, race, education, income and smoking status. Medicare claims files from 2002 were used to identify the dependent and independent variables. Kappa values of measuring DM and dementia between claims based and self/proxy-reported diseases were also addressed to evaluate possible misclassification bias. Three multi-variable logistic regression models were used to estimate the association between dementia and DM. We estimated models with and without CVD to determine the mediating effect of CVD. **RESULTS:** Patients with DM were 36–63% more likely to have a dementia diagnosis (Alzheimer's disease OR = 1.36, 95% CI 1.03–1.78; vascular dementia OR = 1.56, 95% CI 1.27–1.92; overall OR = 1.63, 95% CI 1.35–1.97). After adding CVD to the models, DM was still significantly associated with dementia of all types and vascular dementia, but not with Alzheimer's disease. **CONCLUSIONS:** Patients with DM are more likely to suffer from dementia and the association is only partially mediated through CVD.